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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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	Com	plete if Known	
	Application Number	10/767,102	
	Filing Date	January 29, 2004	
	First Named Inventor	Jene A. Golovchenko	,
	Art Unit	1743	
	Examiner Name	B. Sines	
•	Attorney Docket Number	HVD2160	

	1	•		DOCUMENTS	
Examiner Initials*	Cite No.'	Document Number  Number-Kind Code <sup>2 (F known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevan Figures Appear
	, A1	<sup>US-</sup> 4,455,192	06-19-1984	Tamai	
	A2	<sup>US-</sup> 4,728,591	03-01-1988	Clark et al.	
	A3	us- 4,855,197	08-08-1989	Zapka et al.	
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	A5	<sup>US-</sup> 5,244,527	09-14-1993	Aoyagi	
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	A7	US- 5,420,067	05-30-1995	Hsu	
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	A11	<sup>US-</sup> 5,780,852	07-14-1998	Shu	
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	A14	<sup>US-</sup> 5,798,042	08-25-1998	Chu et al.	
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V	A19	<sup>US-</sup> 5,962,081	10-05-1999	Ohman et al.	

Examiner Initials*	Cite Na.1	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages	7.0
M	<u> </u>	Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>3</sup> (if known) EP-0 632 494 A	MM-DD-YYYY	Mile bisbi Clashia Com	Or Relevant Figures Appear	Ľ
	A20 A21	DE-44 33 845-A	01-04-1995	Mltsubishi Electric Corp. Fraunhofer Ges Forschung		
	A22	WO-00 78668-A		Pres & Fellows Harvard Coll.		
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300500	le lui luini 1445/F l O	Application Number	10/767,102		
INIT	ODMATION DISCLOSURE	Filing Date	January 29, 2004		
	ORMATION DISCLOSURE	First Named Inventor	Jene A. Golovchenko		
STA	ATEMENT BY APPLICANT	Art Unit	1743		
	(Use as many sheets as necessary)	Examiner Name	B. Sines		
Shoot	2 of 7	Attorney Docket Number	HVD2160		

			U. S. PATEN	DOCUMENTS	
Examiner Inflats*	dite No.1	Document Number  Number-Kind Code <sup>2 (f known)</sup>	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevan Figures Appear
91	A23	<sup>US-</sup> 5,969,345	10-19-1999	Williams et al.	
1	A24	<sup>US-</sup> 6,080,586	06-27-2000	Baldeschwieler et al.	
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V	A36	us- 2005/0006224	01-13-2005	Golovchenko et al.	
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J	B	/	Country Code <sup>3</sup> "Number <sup>4</sup> "Kind Code <sup>5</sup> (if known)	MM-DD-YYYY		Or Relevant Figures Appear	
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Subsulu	te for form 1445/PTO			Application Number	10/767,102		
INF	ORMATION	I DIS	CLOSURE	Filing Date	January 29, 2004		
STA	TEMENT B	BY A	PPLICANT	First Named Inventor	Jene A. Golovchenko		
	// / / / / / / / / / / / / / / / / / /	4		Art Unit	1743		
	(Use as many sh	eets as n	ecessary)	Examiner Name	B. Sines		
Sheet	- 3	of	7	Attorney Docket Number	HVD2160		

NON PATENT LITERATURE DOCUMENTS									
Examination Initials*	e/	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>					
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		B2	SHANK et al., "Fabrication of high aspect ratio structures for mcirochannel plates," J. Vac. Sci. Technol. B. Vol. 13, No. 6, pp. 2736-2740, Nov/Dec 1995.						
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·			DESAI et al., "Characterization of micromachined silicon membranes for immuniosilation and biseparation applications," Jnl of Membrane Science, Vol. 159, pp.221-231, 1999.						
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Examiner Signature Considered 2/16/2007		-			 	
Signature (Considered ) 2/16/2007	Examiner	7/2	$\overline{}$		Date	2/11/2007
	Signature			2	 Considered	2/16/2001

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Substitut	te for form 1445/P			Application Number	10/767,102		
INFO	ORMATIC	N DIS	CLOSURE	Filing Date	January 29, 2004		
STA	TEMENT	BY A	PPLICANT	First Named Inventor	Gene A. Golovchenko		
			•	Art Unit	1743		
	(Use as many	sheels as ne	ecessary)	Examiner Name	B. Sines		
Sheet	4	of	7	Attorney Docket Number	HVD2160		

	<u></u>	NON PATENT LITERATURE DOCUMENTS	
caminer itials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T²
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	SS	CHEN et al., "Coulomb blockade at 77 K in nanoscale metallic islands in a lateral nanostructure," Appl. Phys. Lett., Vol. 66, No. 24, pp. 3383-3384, June 1995.	
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<b>V</b>	ww	KLEIN et al., "An approach to electrical studies of single nanocrystals," Appl. Phys. Lett., Vol. 68, No. 18, pp. 2574-2576, April 1996.	
		RR SS TT UU VV	tials* Mo.¹ the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.  NN KENNY et al., "Micromachined silicon tunnel sensor for motion detection," Appl. Phys. Lett., Vol. 58, No. 1, pp. 100-102, January 7, 1991.  CHEN et al., "Novel fabrication method for nanometer-scale silicon dots and wires," Appl. Phys. Lett., Vol. 62, No. 16, pp. 1949-1951, April 1993.  PROCKSTAD et al., "A miniature high-sensitivity broad-band accelerometer based on electron tunneling transducers," Sensors and Actuators A, Vol. 43, pp. 107-114, 1994.  LUTWYCHE et al., "Observation of a vacuum tunnel gap in a transmission electron microscope using a micromechanical tunneling microscope," Appl. Phys. Lett., Vol. 66, No. 21, pp. 2807-2809, May 1995.  RR Particles," Phys. Rev. Lett., Vol. 74, No. 16, pp. 3241-3244, April 1995.  SS CHEN et al., "Coulomb blockade at 77 K in nanoscale metallic islands in a lateral nanostructure," Appl. Phys. Lett., Vol. 66, No. 24, pp. 3383-3384, June 1995.  LUTWYCHE et al., "Microfabrication of a mechanically controllable break junction in silicon," Appl. Phys. Lett., Vol. 67, No. 8, pp. 1160-1161, August 1995.  LUTWYCHE et al., "Direct observation of a vacuum tunnel gap in a tunneling microscope using a transmission electron microscope," J. Vac. Sci. Technol. B, Vol. 13, No. 6, pp. 2819-2822, Nov 1995.  LUTWYCHE et al., "Single-electron transistor of a single organic molecule with access to several redox states," Nature, Vol. 425, pp. 698-701, October 16, 2003.  KLEIN et al., "An approach to electrical studies of single nanocrystals," Appl. Phys. Lett., Vol. 68,

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Signature Considered 2/16/2001	Examiner /	Date	2/11/2007	
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<sup>\*</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Sheet	5	of	7	Attorney Docket Number	HVD2160	

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W	xx	SATO et al., "Observation of a Coulomb staircase in electron transport through a molecularly liked chain of gold colloidal particles," Appl. Phys. Lett., Vol. 70, No. 20, pp. 2759-2761, May 1997.	
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H	H1	JUNNO et al., "Fabrication of quantum devices by Angstrom-levelmanipulation of nanoparticles with an atomic force microscope," Appl. Phys. Lett., Vol. 72, No. 5, pp. 548-550, February 1998.	
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				Application Number	10/767,102	
INFO	ORMATION	DIS	CLOSURE	Filing Date	January 29, 2004	
STA	TEMENT E	BY A	PPLICANT	First Named Inventor	Gene A. Golovchenko	
	//			Art Unit	1743	
	(Use as many she	ets as n	ecessary)	Examiner Name	B. Sines	
Sheet	7	of	7	Attorney Docket Number	HVD2160	

		NON PATENT LITERATURE DOCUMENTS					
	Examiner Cite No		//	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>		
7	Q.		R1	YOO et al., "Electrical Conduction through Poly(dA)-Poly(dG)-Poly)dC) DNA Molecules," Phys. Rev. Lett., Vol. 87, No. 19, pp. 198102-1198102-4, November 2001.			
			S1	LIANG et al., "Kondo resonance in a single-molecule transistor," Nature, Vol. 417, pp.725-729, June 2002.			
			T1	PARK et al., "Coulomb blockade and the Kondo effect in single-atom transistors," Nature, Vol. 417, pp. 722-725, June 2002.			
			U1	STEIN et al., "Ion-Beam Sculpting Time Scales," Phys. Rev. Lett., Vol. 89, No. 27, pp. 276106-1 - 276106-4, December 2002.			
			V1	GORDON et al., "A Kinetic Model for Step Coverage by Atomic Layer Deposition in Narrow Holes or Trenches," Chemical Vapor Deposition, Vol. 9, No. 2, pp. 73-78, 2003.			
	V	/	W1	Lt et al., "DNA molecules and configuration in a solid-state nanopore microscope," Nature Materials, Vol. 2, pp. 611-614, September 2003.			
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Examiner Date Considered Signature

EXAMINER: Initial inference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include dopy of this form with next communication to applicant.

1 Applicant's unique citation designation number (optional). 2 Applicant is to place a check mark here if English language Translation is attached.

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